

# Notice of Allowability

Application No.

10/754,914

Examiner

David S. Warren

Applicant(s)

HENNINGS ET AL.

Art Unit

2837

## -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 2/27/07.
2. ☒ The allowed claim(s) is/are 1-3, 7-15, 17, 19-22 and 25-30.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material

5. ☐ Notice of Informal Patent Application

6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_

7. ☐ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

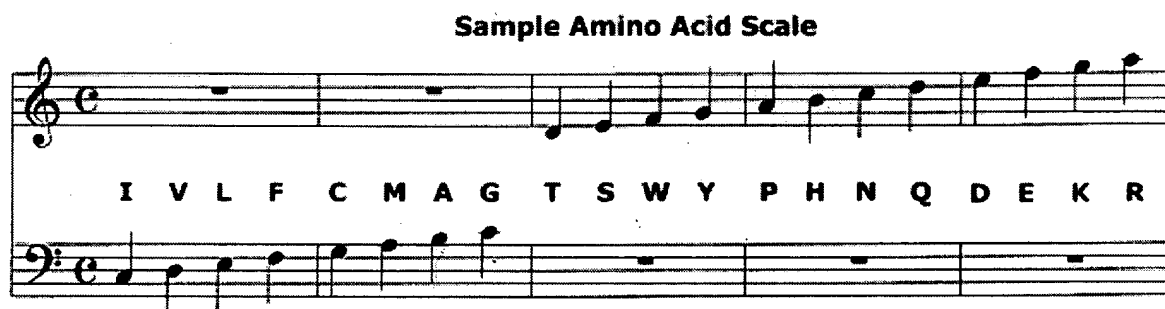
9. ☐ Other \_\_\_\_\_

LINCOLN DONOVAN  
SUPERVISORY PATENT EXAMINER

**DETAILED ACTION*****Allowable Subject Matter***

Claims 1 – 3, 7 – 15, 17, 19 – 22, and 25 – 30 are allowed.

The following is an examiner's statement of reasons for allowance: Regarding claims 1, 8, 15, and 25, while there appears to be many non-patent references to music created using DNA, none of the prior art cites using nucleotides (and/or amino acids) to generate chords as well as melodies. Typically, the prior art uses amino acids (twenty exist) to form notes of a scale as shown below:



Also, another common technique is to use the bases (A, C, T, and G) as notes (where T is typically replaced with the note E). While these techniques may generate harmony (especially if several genes are “played” concurrently), the prior art is silent as to allocating a chord sequence to an amino acid sequence. The Examiner alerts the Applicants to Pajak (<http://www.whozoo.org/mac/Music/AlexPajak/PajakStory.htm>) which specifically mentions that “there are 20 amino acids so she assigned chords to different amino acids.” However, the publication date of March 5, 2003 disqualifies this reference as prior art. To reiterate, the Examiner maintains that the prior art does not show using an amino acid to generate both a harmony (i.e., a chord) and a melody (i.e.,

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a sequence of notes). Regarding claims 17 and 19 (which contain the limitations of claim 8), the Applicant's have defined "data carrier" as "an **apparatus** configured and adapted to carry a data signal; in the present invention, a data carrier may be an **electronic medium** such as a **computer**, a **compact disc** (CD), and the like."

[emphasis added]. Therefore, no rejection under §101 is deemed appropriate (see page 3 of Applicant's specification). Independent claim 22, contains all limitations of allowable claim 8.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

**Conclusion**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Since most prior art resides online the following are deemed to be most pertinent:

<b>Reference:</b>	<b>Annotation:</b>
<a href="http://www.algoart.com/help/pdf/bioeditor.pdf">http://www.algoart.com/help/pdf/bioeditor.pdf</a>	User manual
<a href="http://www.algoart.com/bio2midi.htm">http://www.algoart.com/bio2midi.htm</a>	sequences as 4-note DNA bases, or as 20-note protein amino acids,
<a href="http://www.algoart.com/help/bio2midi/scale.htm">http://www.algoart.com/help/bio2midi/scale.htm</a>	Assigns, e.g., Isoleucine to F#0 and Asparagine to D#3
<a href="http://www.whozoo.org/mac/Music/Primer/Primer_index.htm">http://www.whozoo.org/mac/Music/Primer/Primer_index.htm</a>	Tutorial on DNA music
<a href="http://www.whozoo.org/mac/Music/CarolMiner.pdf">http://www.whozoo.org/mac/Music/CarolMiner.pdf</a>	DNA music project for school children
<a href="http://amas.cz3.nus.edu.sg/music/">http://amas.cz3.nus.edu.sg/music/</a>	Multiple (5 in total) structural and physicochemical properties of amino acids are used to control the tones, pitches, intensity and the instruments played
<a href="http://www.whozoo.org/mac/Music/AlexPajak/PajakStory.htm">http://www.whozoo.org/mac/Music/AlexPajak/PajakStory.htm</a>	Assigns amino acids to chords (lacks adequate data)
<a href="http://www.toddbarton.com/music.asp">http://www.toddbarton.com/music.asp</a>	Provides samples of music, which appear to employ chords, but is silent to any type of composition technique.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David S. Warren whose telephone number is 571-272-2076. The examiner can normally be reached on M-F, 9:30 A.M. to 6:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lincoln Donovan can be reached on 571-272-2837. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Dsw

  
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